

Claims

1. Fuel cell (1) supported on the electrode side, comprising an anode (2), electrolyte (3) and cathode (4), the electrode support comprising a porous part made of an alloy with iron and chromium, characterised in that said electrode support is a cathode support (5).  
5
2. Fuel cell according to Claim 1, wherein said cathode support comprises a sintered powder.
- 10 3. Fuel cell according to Claim 1 or 2, wherein the electrolyte has a thickness of less than 10  $\mu\text{m}$ .
4. Fuel cell according to one of the preceding claims, wherein the anode comprises nickel/nickel oxide.  
15
5. Fuel cell according to one of the preceding claims, wherein the cathode comprises LSM material.
6. Fuel cell according to one of the preceding claims, wherein said cathode support  
20 comprises Fe-Cr or Fe-Cr-Al material.
7. Fuel cell according to one of the preceding claims, equipped to be provided with air on the cathode side.
- 25 8. Fuel cell according to one of the preceding claims, wherein the anode has a thickness of less than 50  $\mu\text{m}$ .
9. Method for the production of an electrode-supported fuel cell, comprising the provision of a metallic support comprising at least iron or chromium, the successive  
30 application thereon of an electrode, electrolyte and other electrodes, characterised in that a cathode is applied to said metallic support and the combination obtained is sintered at a temperature between 1000 and 1200 °C.

10. Method according to Claim 9, wherein said cathode support is obtained by sintering a powder.

11. Method according to Claim 10, wherein said powder is cast in the form of a suspension and then sintered.

12. Method according to one of Claims 9 - 11, wherein said application of said cathode comprises a printing technique.

13. Method according to one of Claims 9 - 12, wherein the application of the electrolyte to said cathode comprises spin coating.

14. Method according to one of Claims 9 - 13, wherein said anode comprises nickel/nickel oxide.

15. Method according to one of Claims 9 - 14, wherein said cathode support comprises stainless steel.

16. Method according to one of Claims 9 - 15 in combination with Claim 10, wherein said powder has a particle size of less than 150  $\mu\text{m}$ .